

**ABSTRACT OF THE DISCLOSURE****APPARATUS AND METHOD FOR VIRTUALIZING A QUEUE PAIR SPACE  
TO MINIMIZE TIME-WAIT IMPACTS**

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10 An apparatus and method for virtualizing a queue pair space to minimize time-wait impacts. The apparatus and method allocate virtual queue pairs from a virtual queue pair pool of a node to connections between the node and other nodes. The connection is established between a physical queue pair of the node and physical queue pairs of other nodes. However, from the viewpoint of the other nodes, they are communicating with the present node using the virtual queue pair and not the physical queue pair

15 for the present node. By using the virtual queue pairs, the same physical queue pair may accommodate multiple connections with other nodes simultaneously. Moreover, by using a virtual queue pair rather than a physical queue pair, when a connection is torn down, the virtual

20 queue pair is placed in a time-wait state rather than the physical queue pair. As a result, the physical queue pair may continue to function while the virtual queue pair is in the time-wait state.

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